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RESISTANCE TRAINING AND EXERCISE SELECTION FOR SPRINT ATHLETES: A SURVEY OF COACHES VIEWS

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Introduction

Although the use of resistance training in athletics is commonplace, a paucity of research exists examining the longitudinal effects of resistance training and its effect on performance in sprinters (Bolger et al. 2014). A significant gap in the literature exists about which resistance training exercises are most effective for sprint athletes. The aim of this study was therefore to identify the most commonly prescribed resistance training exercises by sprint coaches to their sprint athletes.

Method

An online survey was electronically mailed to a database of all coaches registered with Athletics Ireland with a total of 170 individuals responding. Respondents were excluded from the analyses if they were not involved in coaching sprint athletes or if they failed to complete the survey. A total of 50 coaches met the inclusion criteria and were included in the final analyses. The survey separated resistance training exercises into three categories i.e. heavy resistance training exercises, dynamic resistance training exercises and plyometric or jump type exercises. Subjects were asked to name and describe prescribed exercise that was not listed. Subjects were also asked to name the two exercises from each category that they prescribed most often.

Results

Overall, the repeated (i.e. rebound) hurdle jump was the most popular exercise with 94% (n=47) of coaches reporting that they prescribed it. The jump squat was the most popular dynamic resistance training exercise with 58% (n=29) of coaches reporting that they prescribed it whereas the back squat was the most popular heavy resistance training exercise with 56% (n=28) of coaches reporting that they prescribed it.

Discussion

The plyometric and jump type exercises were overall, the most prescribed exercises. This is not surprising since plyometric exercises develop the stretch shortening cycle which is very important in sprinting (Sáez de Villarreal et al. 2012). Traditional heavy resistance training exercises were prescribed least, possibly due to concerns of poor specificity and transfer to performance (Young, 2006).

Conclusion

Coaches prescribe a wide variety of resistance training exercises to their sprint athletes. Plyometric exercises are the most commonly prescribed type of exercise, potentially due to their biomechanical specificity to sprinting. In an effort to maximise the potential transfer between resistance training exercises and sprint performance, coaches should prescribe exercises based on their ability to develop physical qualities that are beneficial to sprinting such as the stretch shortening cycle.

References

- Bolger, R., Kenny, I., Lyons, M., Harrison, A. (2015) *J Strength Cond Res.*
- Sáez de Villarreal, E., Requena, B., Cronin, J.B. (2012) *J Strength Cond Res.* 26(2):575-84
- Young, W.B. (2006) *Int J Sports Physiol Perform.* 1(2):74-83.

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